



Everyday Innovations: Reimagining “Permits to Work”

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Navigating the dynamic landscape of business innovation is built on a single constant of solving real-world challenges with the help of technology. This is a principle that is held close for us in the TM R&D team.

One of our best examples of digital innovation in solving industry challenges is our endeavour in revolutionising operational safety, a cornerstone of industry standards.

Operational safety plays a critical role in various sectors but often grapples with inefficiencies and risks due to outdated, paper-based processes. The issuance of permits, a linchpin in ensuring workplace safety, has traditionally been a cumbersome, manual task for many organisations. We are all too familiar with the pitfalls of paperwork—ranging from mere tedium to pure chaos—leading to delays, oversight, increased safety hazards and environmental issues.

Digitalising operational safety is not just a possibility; it is a necessity. Hence, in 2019, TM R&D began developing a cloud-based solution to address these challenges—the aptly named "electronic Permit to Work" (ePTW) system. Our goal was clear: eliminate fraud, enforce compliance, and enhance operational safety through a systematic digital permit issuance process.

The ePTW system leverages the power of the cloud and integrates cutting-edge Artificial Intelligence based technologies like facial and object recognition. The benefits are far-reaching:

- 1) **Decreased Waiting Times:** Real-time inspections and verifications online eliminate delays associated with on-site permit issuance, maximising Hands-on-Tool-Time (HoTT) for workers and boosting overall productivity.
- 2) **Reduced Operational Costs:** Online, real-time inspections not only streamlines the process but also significantly reduces costs related to travel and time consumed for permit approval.
- 3) **Fewer Risks and Safety Incidents:** The digital system, fortified by geotagging and facial recognition, leaves no room for compromising safety requirements. It acts as a robust enforcer with built-in business rules and pre-defined equipment lists.
- 4) **Standardised Processes:** Hosting all permit approvals and processes on the cloud ensures transparency, facilitating review, sharing, and process refinement. This contributes to achieving overall operational excellence goals.

Our implementation of ePTW within TM's operations has yielded tangible results. The relief from administrative paperwork, the reduction of fraud and inadequate safety measures on-site, and the increase in productivity underscore the transformative power of innovation and technology in addressing real-life industry challenges.

But, in the spirit of innovation, let us look beyond the confines of industry challenges. Can the success of ePTW be stretched to address social issues?



Consider the case of foreign employees; being one myself, I am acutely aware that this demographic faces challenges akin to those of our industrial safety initiatives. With nearly 2.2 million documented foreign employees in Malaysia as of 2022, the existing paper-based processes for obtaining an Employment Pass are riddled with inefficiencies, fraud, and are often rife with abuse.

Leveraging the cloud and artificial intelligence, as demonstrated by the ePTW system, could potentially revolutionise the landscape for foreign employees. Imagine a system that ensures safer and more secure working conditions for employees, protects the interests of employers through transparency, and provides substantial measures against fraud and abuse. The same principles of innovation, digitalisation, and technology that have proven effective in our industrial pursuits could be applied to create meaningful change in the lives of foreign employees working in any and all industries; blue-collar, white-collar and everything in between.

The success of an innovation lies in solving everyday challenges and in improving digital lifestyles. As we continue to push the boundaries of innovation, let us not forget the broader impact our technologies can have on society. The launch of ePTW is not just a testament to our ability to solve industry challenges—it is an invitation to explore how innovation can create positive, lasting change in how our society works.

Our journey with ePTW has demonstrated the transformative power of innovation, and I am confident that by embracing larger challenges with the same spirit, we can continue to shape a future where technology not only solves problems but also enhances the well-being of individuals and communities, no matter where they work or where they come from.